PROBLEMS OF MODERN ORGANIC CHEMISTRY

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Annotation: The science of chemistry is a science that deals with personnel, substances and bodies of all nature. Nature is a miracle, and there are a lot of mysteries that have not yet been opened it. That's the secret-Chemistry, Biology, Physical Sciences are very important for the opening of situations. In order to master these disciplines, students will need a lot of literature. But the issue of literature is now one of the most pressing problems. In order to overcome these problems, it is desirable to create a manual that is convenient for the students to use. Well, one of the urgent tasks is to translate the literature necessary for the students today into Uzbek, which is written in other languages, to create new ones.

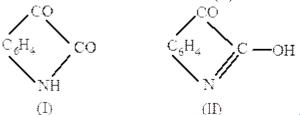
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One such literature is the science of" problems of modern organic chemistry".

American scientist M. in 1900 year Homberg revealed free radical triphenylmethyl radical bunda, which he previously intended to synthesize geksafeniletane:

$$2(C_6H_5)_3CCl + 2Ag = (C_6H_5)_3C - C(C_6H_5)_3 + 2AgCl$$

The received crystalline substance is stable, when dissolved, a color solution is formed, in which it reacts with oxygen and halogen . physico-chemical analysis has proved the presence of free radicals in the solution. In subsequent inspections, it was proved that many free radicals are present in the solution and in the gas phase. When decomposing lead alkyl formations, scientists found that those who received free methyl radicals had a time of its residence (0,01 C).later, free radicals of nitrogen, oxygen, other elements were also obtained since the course of the reaction depends on the structure of the substances, since they are all in different forms. For example, isatin in the form of lactone (I), or in the form of lactime also entered into reactions (II):



This condition is understood as tautomeria eg azetouksus effiri enol - and ketone meet in forms. Here such types of reactions are checked even now by scientists of the world and substances with the desired properties are obtained in practice.

The most reliable direction in organic chemistry is the research in the field of elemental chemistry. If the beginning of this chemistry began to remove zinc from organic substances, then the chemistry of magnesium compounds provoked the development:

$$2C_2H_5I + 2Zn = (CH_3)_2Zn + ZnI_2$$

On the basis of the Grinyar reaction, alcohols, carbonic acids, alkanes were obtained:

$$\begin{split} C_2H_5Br + Mg &= C_2H_5MgBr \\ C_2H_5MgBr + H_2O &= C_2H_6 \uparrow + MgOHBr \end{split}$$

In industry, the role of kremniorganic substances is said to be large them silicones, these substances are not found in nature. An example of such substances is methyl ether of orthochromic acid, tetraetylsilan. The basis of alkoxysilan formation in the extraction of silicone resins was gouliz. The synthesis of Silicon-Inorganic Polymers is obtained by goulysis and condensation of esters of

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161

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orthochromic acid, these substances are widely used in obtaining rubber, resins, electroplating materials.

Among phosphoric substances, phenylphosphonic acids and three-valent phosphoric derivatives were obtained = P-OR and = P-SR phosphoric substances are widely used in agriculture and in medicine.

The present-day industry can not function without organic homeopathy. For example, in the oil industry a large amount of oil, gas, coal, wood, peat, slate, oil and gas in the petrochemical industry, various chemical products are obtained from cars and Avi fuels (gasoline, kerosene, diesel), surkov oils, monomers in the production of polymer substances, most solvents, obtaining artificial detergents, in the industry of varnish, olif, organic products, pigments., in textiles and tanning, clothing and footwear are obtained from natural and artificial organic raw materials. But organic synthesis plays a leading role, although many drugs from pharmacology are derived from natural homashy. Polymeric substances are also used in medicine especially in surgery, these are heart valves based on lavsan and Capron, organic synthesis products are widely used even in orthopedics and Traumatology. In construction, too, there is a role of artificial building materials. Silicon organic matter is based on surface active substances. In agriculture, fertilizers, plant protection preparations are also products of organic synthesis. Even in the food industry, organic substances have a significant place.

Currently, cars, aircraft, sea and rail transporti organic chemistry fulfills the demand for various kinds of sortable rubber, polymer materials, combustible and surrogate materials. Similar organic chemicals can not go forward in the electricity industry, nuclear energy, space research.

The importance of organic chemistry to date is as follows:

-the abundance of organic substances is the formation of long chains by connecting one of the atoms of uglerod at present the number of organic substances is more than 10 million, inorganic substances is more than 700 thousand.

-with a mass of more than 10 thousand atoms of uglerod from the complexity of organic substances (natural biopolymers, proteins, carbohydrates)

-with the difference of organic substances from inorganic, that is, with high temperature resistance, liquid temperature, flammability

-with the slow course of reactions to inorganic substances, the formation of additional products, new methods of separation and other technological devices

- with the practical importance of organic matter. This is our food and clothing, all kinds of medicinal preparations, most polymeric substances, etc.

The present-day organic chemistry is absorbed in other sciences, these are biology, medicine, agriculture. On account of organic synthesis, the mechanism of nerve impulses, metabolism in the body, as well as the acquisition of active genes (1976-1978 y), it was by organic chemistry that they encode the synthesis of insulin and interferon, essential elements and peptides necessary for life. If in the XIX-XX centuries New useful substances were obtained through experiments of chance or error, then today organic chemistry is synthesized the necessary characteristic substances, taking into account the chemical bonds and spatial structure, taking into account the dependence of the structure of certain substances and knowing stereochemistry.

The structure specification is not only between atoms masofasi the valence and torsion angles, depending on the thickness of the lattice these affect the properties of organic molecules especially in polymers, enzymes. In living nature, it is important that the high-molecular substances in the body are regulary structural. For example, the generation depends on the protein formation through the matrix of the corresponding gene collection of specific structures.

At present, in addition to mass spectroscopy, X-ray and electronography, YAMR, infrared and ultraviolet spectroscopy for the structure of the molecule, quantum mechanics calculations are

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considered in powerful EXM laboratories, and the modern conformational analysis is carried out. On the account of such weapons, the modern organic chemistry synthesizes new chemicals in Chemistry, Biochemistry and other fields. Chemists of the world today were able to synthesize substances that meet or are unknown in a complex structure of nature. But the synthesis of several substances at the same time in the cell is difficult to achieve their quantitative quality and stererugular.

The present-day organic chemistry is gaining a great deal of experimental and theoretical material from year to year. Many organic products are being developed ,they are widely used in various industries of the national economy. In different directions of organic chemistry, a large number of new substances are being transported and several thousand are being extracted, many of which are of practical importance.it is difficult to write a work about the unique organic chemistry that is added to the present day, so if you collect and book the work done, it will be a few drops.

Nowadays organic chemistry is a rapidly developing science and we can see it in most articles, monographs, and reviews. But it's hard to say that one or two chemists are aware of all the innovations of this science.

Our country is developing industry in the following areas: development of plastics, obtaining artificial resins, obtaining varnishes, paints, artificial rubber, chemical fibers, biochemicals, fertilizers, obtaining various chemical reagents. Year after year, the volume of these products increases, they are widely used in the national economy, which is the reason for the increase in experimental and theoretical knowledge in organic chemistry. The most important thing is the reason for such a rapid development of the chemical industry as natural gas and oil refining.in modern organic chemistry, work is being carried out to preserve the Binding of the reaction rate constants to the structure of substances, through the calculation of a large amount of correlation, as well as the effect of the solvent on the conservation of laws through simple quantitative proportions. The importance of Physical Research in solving structural problems of organic molecules is great, especially in the field of ultraviolet and infrared spectroscopy, as well as in the field of chemical analysis of combustion temperature, paraxor, dipole moment, Kinetic Research, magnetic permeability, brushed atomic method, chromatography and electrophoresis constants, speed of Fusion in the centrophylaxis, fluorescent analysis, nefelometry, polyarometry, mass spectroscopy, X-ray the analysis of electron paramagnet resonance and nuclear magnetic resonance Spectra made it easier to determine the structure of molecules.

With the help of new physical chemical methods, in which modern organic chemistry was invented, the purification of substances is achieved in a small period of time, work on determining their structure.in recent times, confidence in aromatic substances has increased, benzene ring did not hold, but Substances of aromatic character have been synthesized.

The field of modern organic chemistry includes many tons of methanol, polymers, vitamins, biopolymers, genes and other complex biological systems. And we see that it penetrates into other areas close to itself, such as material science, biology, medicine, agriculture.here is such a sideshow we see on the example of the synthesis of steroids.

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